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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/797,068	03/11/2004	Yih-Feng Hwang	ASH-03-010	4377
25537	7590	11/21/2007		
VERIZON PATENT MANAGEMENT GROUP 1515 N. COURTHOUSE ROAD SUITE 500 ARLINGTON, VA 22201-2909			EXAMINER STEELMAN, MARY J	
			ART UNIT 2191	PAPER NUMBER
			NOTIFICATION DATE 11/21/2007	DELIVERY MODE ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No. 10/797,068	Applicant(s) HWANG, YIH-FENG	
	Examiner MARY STEELMAN	Art Unit 2191	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 September 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) _____ is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-28 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

**MARY STEELMAN
PRIMARY EXAMINER**

Mary Steelman

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This Office Action is in response to Claim Amendments and Remarks received 09/20/2007. Per Applicant's request, claims 2-5, 7-16, & 19-28 are amended. Claims 1-28 are pending.

Claim Rejections - 35 USC § 101

2. In view of the amendments to Claims 9-16 & Claims 22-28, the prior 35 USC § 101 rejections are hereby withdrawn.

Claim Rejections - 35 USC § 112

3. In view of the amendment to claim 19, the prior 35 U.S.C. 112, 2nd paragraph rejection is hereby withdrawn.

Response to Arguments

4. Applicant's arguments filed 09/20/2007 have been fully considered but they are not persuasive.

Applicant has argued, in substance, the following:

(A) Regarding independent claim 1, as noted on page 13, bottom paragraph, Chan et al "does not disclose, suggest or even mention identifying faults and modifying business rules based on

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the identified faults”...by applying generic depth-first search (DFS) based techniques to the business rules, and modifying the business rules based on the identified faults.

Examiner’s Response:

Examiner disagrees. See Specification [0044 - 0052] which describes six categories of chained inference faults: inconsistency, circularity, subsumption, contradiction, redundancy, and incompleteness. [0055], analyzed to find faults (conflicts). Applicant has defined faults to include conflicts.

As one example, Chan disclosed (col. 5: 42-45) “the role of the Conflict Transformer 15 is to analyze the input rulesets for **conflicts** (identify faults) and resolve conflicts among rules from one or more rulesets based on the user defined merge policy...includes syntax and semantics to express conflict resolution (modifying business rules based on the identified faults)...”

(emphasis added)

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1, 3, 4, 6-9, 11, 12, 14-20, 22, 24, 25, 27, and 28 are rejected under 35 U.S.C. 102(e) as being anticipated by USPN 6,910,028 B2 to Chan et al.

Per claims 1, 9, 17, 18, and 22:

A method of integrating software systems comprising:

Chan:

- identifying a scope of the integration based on a multi-level top-down approach;
- identifying faults in business rules that define software in the scope of the integration by applying generic depth-first search (DFS)-based techniques to the business rules;
- and modifying the business rules based on the identified faults.

Chan: Col. 3: 58 – col. 4: 20, merger of rules with different format Col. 5: 29, merge policy M1 which defines the rules and conflict resolution prioritization schemes utilized by the system for enabling the merging of the rule sets Col. 6: 11-12, FIG. 2 is a diagram depicting the high level interaction between the various components underlying the conflict handling and assimilator service 19 for rule based knowledge systems and application Col. 6: 43-61, Conflict Transformer 15...analyze the input rulesets for conflicts and resolve conflicts... Col. 7: 48-52, Conflict Transformer 15...analyze the rules for conflicts, introduces new rules and predicates based on the specifications of the merge policy 25 Col. 8: 24-32, Partially ordered

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priorities...represent more recently acquired rules...or rules from more authoritative sources

Col. 8: 43-46, two businesses may merge rule-sets R1 and R2

Col. 7: 44-47, backward / forward inferencing Col. 8: 67, chaining

Per claims 3, 11, and 24:

-wherein the multi-level top-down approach includes:

a first level that includes high-level software systems.

Chan: Col. 6: 11-12, FIG. 2 is a diagram depicting the high level interaction between the various components underlying the conflict handling and assimilator service 19 for rule based knowledge systems and application See FIG. 1, Rule_System_2 (S2) & Rule_System_1 (S1) Col. 8: 3-4, relative authority level of the originating source application

Per claims 4, 12, and 25:

-the multi-level top-down approach further includes:

a second level that includes business processes of the high-level software systems.

Chan: See FIG. 1 Ruleset_1 (R1) & Ruleset_2(R2) - business processes

Per claims 6, 14, 19, and 27:

-comparing the business processes to locate similar business processes that are to be integrated.

Chan: Col. 5: 29-32, merge policy...defines the rules (processes that are to be integrated) and conflict resolution prioritization schemes

Per claims 7 and 15:

-wherein identifying the scope of the integration is performed on software systems from multiple merging entities.

Chan: Col. 5: 41-47, assimilator service 19

Per claims 8, 16, 20, and 28:

-the identified faults include faults of at least one of inconsistency, contradiction, circularity, subsumption, redundancy, and incompleteness.

Chan: Col. 6: 24-26, methods to resolve conflicts Col. 6: 42-48, Conflict Transformer
15...priority specification and mutual exclusion statements Col. 8: 21-23, Enforcement of
mutual exclusion...guarantees consistency Col. 8: 57-67, Mutual exclusion
constraints...Consistency...enforced

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

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having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 2, 10, 21, and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over USPN 6,910,028 B2 to Chan et al., in view of Detecting Faults in Chained Inference Rules in Information Distribution Systems by Hwang (1997).

Per claims 2, 10, 21, and 23:

Chan failed to explicitly disclose:

-wherein identifying faults in the business rules includes:

representing the business rules using a transition-directed graph (TDG) representation.

However Hwang disclosed (Page 7, section 1.2) such a directed graph.

Therefore it would have been obvious, to one of ordinary skill in the art, at the time of the invention to modify Chan, using the teachings of Hwang, because Chan recognized (col. 1: 51) rule based systems, that support forward / backward chaining, relating dependencies on being satisfied / triggering. Chan disclosed that such (col. 2: 60) rule based systems are used to encapsulate business rules. Such logic is hierarchically related, and expressed in XML (Chan, col. 7: 14).

8. Claims 5, 13, and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over USPN 6,910,028 B2 to Chan et al., in view of US Patent Application Publication 2004/0078777A1 to Bahrami.

Per claims 5, 13, and 26:

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Chan failed to explicitly disclose:

-wherein the multi-level top-down approach further includes:

a third level that includes business rules that are defined as transitions in the business processes;

a fourth level that includes interface functions that define communications between the business rules;

a fifth level that includes data used by the business rules and the interface functions.

However, Bahrami disclosed a Business Process and Information Model (FIG. 8, #602), hierarchically relating rules functions and data used by the system. Bahrami disclosed [0019-0021] a system for modeling business processes, document work processes (rules and transitions), model and simulate such processes, and exchange such models with workflows for execution of work processes. The system includes a repository 24. Bahrami disclosed [0024] communication interface 68 (interface functions) [0026], modeling, metadata such as the diagrams...define a static view of a business process that...with additional information relating to resources and duration of tasks can be used directly in dynamic simulation of the process. [0036], different levels of detail in process mapping & hierarchical process modeling

Therefore, it would have been obvious, to one of ordinary skill in the art, at the time of the invention, to modify Chan, using the teachings of Bahrami, because Chan disclosed modeling merging rulesets (col. 3: 37) and assimilating the into a rule based knowledge system (col. 4: 67). Chan disclosed rules with predicates (col. 7: 51-52). Such analysis is can best be portrayed using various levels of detail as disclosed by Bahrami [0036].

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mary Steelman, whose telephone number is (571) 272-3704. The examiner can normally be reached Monday through Thursday, from 7:00 AM to 5:30 PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wei Zhen can be reached at (571) 272-3708. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Any inquiry of a general nature or relating to the status of this application should be directed to the TC 2100 Group receptionist: 571-272-2100.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Mary Steelman

10/31/2007

MARY STEELMAN
PRIMARY EXAMINER

